RECEIVED
CENTRAL FAX CENTER
JUN 22 2005

AMENDMENTS

In the claims:

1-6. (Canceled)

7. **(Currently amended)** A method for detecting the presence of a target nucleic acid, comprising:

(a) hybridizing a probe with an attached transition metal ligand complex to said target nucleic acid to produce an initial complex;

(b) adding a free metal ion to the initial complex to produce an electrically conductive complex; and,

(c) applying an electrical potential to the electrically-conductive complex to produce a measurable light signal.

8. (Canceled)

9. (Previously presented) A method as recited in claim 7, wherein said transition metal-ligand complex has a central atom selected from the group consisting of osmium and ruthenium.

10. (Original) A method as recited in claim 7, wherein the metal added in step (b) is selected from the group consisting of zinc, cobalt and nickel.

11. (Previously presented) A method as recited in claim 7, wherein said measurable light signal is a chemiluminescent signal.

12. (Previously presented) A method as recited in claim 7, wherein said measurable light signal is an electrochemiluminescent signal.

13. (Previously presented) A method as recited in claim 7, wherein a plurality of metal ions is added to said electrically conductive complex.

14. (Previously presented) A method as recited in claim 7, wherein a plurality of different metal ions is added to said electrically conductive complex.

15. (Canceled)

16. **(Currently amended)** A method for detecting the presence of a nucleic acid target, comprising:

independently adding together a probe having an attached transition metal-ligand complex, a target capable of hybridizing to the probe, and a free metal ion to produce an electrically-conductive complex; and

applying an electrical potential to said electrically conductive complex to detect the presence of said nucleic acid target.

17. (Canceled)

18. (Original) A method as recited in claim 16, wherein said transition metal-ligand complex is selected from the group consisting of osmium and ruthenium with organic coordinating ligands.

19. (Original) A method as recited in claim 16, wherein the metal ions are selected from the group consisting of zinc, cobalt and nickel.

20. **(Currently amended)** A method for detecting the presence of a nucleic acid target, comprising:

(a) hybridizing a probe having an attached transition metal-ligand complex with said target to produce an initial complex, wherein the transition metal-ligand complex produces a light signal in response to application of an electric potential;

(b) adding a free metal ion to the initial complex to produce a final electrically conductive complex; and

(c) applying the electric potential through the final complex to the transition metal-ligand complex, to cause the label to produce the light signal.

21. (Canceled)

22. **(Currently amended)** A method for detecting the presence of a target nucleic acid, comprising:

(a) hybridizing a probe attached to a substrate with an attached transition metal ligand complex to said target nucleic acid to produce an initial complex;

(b) adding a **free** metal ion to the initial complex to produce an electrically conductive complex; and,

(c) applying an electrical potential to the electrically-conductive complex to produce a measurable light signal.

23. (Currently amended) A method for detecting the presence of a nucleic acid target, comprising:

independently adding together a probe attached to a substrate having an attached transition metal-ligand complex, a target capable of hybridizing to the probe, and a **free** metal ion to produce an electrically-conductive complex; and

applying an electrical potential to said electrically conductive complex to detect the presence of said nucleic acid target.

24. **(Currently amended)** A method for detecting the presence of a nucleic acid target, comprising:

(a) hybridizing a probe attached to a substrate having an attached transition metal-ligand complex with said target to produce an initial complex, wherein the transition metal-ligand complex produces a light signal in response to application of an electric potential;

(b) adding a **free** metal ion to the initial complex to produce a final electrically conductive complex; and

(c) applying the electric potential through the final complex to the transition metal-ligand complex, to cause the label to produce the light signal.